UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE BOARD OF PATENT APPEALS
AND INTERFERENCES

Ex parte KLAUS-LEO WILBUER, RUDOLF DIERSCH, HERMANN STELZER, MATTHIAS PATZELT and DIETER METHLING

Appeal No. 2006-1899
Application No. 09/856,816
Technology Center 3600

ON BRIEF

Before OWENS, CRAWFORD and LEVY, *Administrative Patent Judges.*

OWENS, *Administrative Patent Judge.*

DECISION ON APPEAL

The appellants appeal from a rejection of claims 38-43 and 45-47. Claims 1-37 have been canceled, and claims 44 and 48-58 stand withdrawn from consideration by the examiner as claiming a nonelected invention.

THE INVENTION

The appellants claim a method for forming a neutron absorbing coating on a shielding element. Claim 38 is illustrative:

> A method for producing a coating for absorption of neutrons generated in nuclear reaction of radioactive materials on a shielding element at least partly, the method comprising:

providing a shielding element having a base material and appropriately predefined surfaces;

providing a dispersion bath comprising a first substance having a high neutron capture cross-section and a second substance being electrolytically precipitable metallic wherein the first substance is in a form of an electrically conductive compound;

submerging said shielding element at least partly with appropriately predefined surfaces to be coated into said dispersion bath;

intermittently generating a relative movement between the respective surface to be coated and the dispersion bath during the coating process; and

removing the shielding element from said dispersion bath.

THE REFERENCES

Weinberg	3,411,999	Nov. 19, 1968
Wang	4,238,299	Dec. 9, 1980
Planchamp	4,865,645	Sep. 12, 1989
Gerdon et al. (Gerdon)	5,372,701	Dec. 13, 1994

THE REJECTIONS

The claims stand rejected as follows: claims 38-43 and 46 under 35 U.S.C. § 102(b) over Wang; claims 38-43 and 46 under 35 U.S.C. § 103 over Wang in view of Gerdon, Planchamp and the appellants' admitted prior art; and claims 45 and 47 under 35 U.S.C. § 103 over Wang in view of Weinberg.

OPINION

We reverse the aforementioned rejections. We need to address only the sole independent claim, i.e., claim 38. The examiner does not rely upon Gerdon, Planchamp, the admitted prior art or Weinberg for any disclosure or suggestion of the claimed subject matter missing from Wang (answer, pages 6-7).

Claim 38 requires a dispersion bath comprising a first substance having a high neutron capture cross-section and being in the form of an electrically conductive compound. For a disclosure of that compound the examiner relies (answer, pages 10-11) upon Wang, which discloses a neutron absorbing material comprising "electrically nonconductive boron carbide" (abstract; col. 1, lines 25-26; col. 2, lines 13-14).

The appellants argue that Wang discloses that the boron carbide is electrically nonconductive, not electrically conductive as required by the appellants' claim 38 (reply brief, page 2).

The examiner argues that the appellants' claim 40, which recites that "the first substance is at least one of the elements of the group that consists of boron, gadolinium, cadmium, samarium, europium and dysprosium", is an admission that boron alone is electrically conductive (answer, page 10). The

appellants' claim 38 does not require that the first substance is electrically conductive but, rather, requires that the first substance is in the form of an electrically conductive compound. Examples in the appellants' specification of boron-containing electrically conductive compounds are iron boride and nickel boride (page 6). Thus, claim 40 is not an admission that boron is electrically conductive.

The examiner argues that page 6 of the appellants' specification discloses boron carbide (answer, page 10). That page states that boron has high neutron capture capability both in elemental form and as boron carbide. Electrically nonconductive compounds such as boron carbide, however, are excluded from the appellants' claimed subject matter by the requirement that the first substance is in the form of an electrically conductive compound.

The examiner argues that the appellants' term "electrically conductive compound" encompasses every compound having an electrical conductivity greater than zero (answer, pages 10-11). During patent prosecution, claims are to be given their broadest reasonable interpretation consistent with the specification, as the claim language would have been read by one of ordinary skill in the art in view of the specification. *See In re Zletz*, 893

F.2d 319, 321, 13 USPQ2d 1320, 1322 (Fed. Cir. 1989); *In re Sneed*, 710 F.2d 1544, 1548, 218 USPQ 385, 388 (Fed. Cir. 1983). The appellants' specification states that "[b]oron carbide offers only low conductivity, i.e. semiconductive characteristics at best" (page 5). The specification further states that metal compounds such as iron boride and nickel boride are particularly suitable electric conductors (page 6). Hence, the specification indicates that boron carbide is not among the compounds that are electric conductors. Wang further indicates that in the relevant art, boron carbide was considered electrically nonconductive (abstract; col. 1, lines 25-26; col. 2, lines 3-5 and 13-14).

The examiner does not argue that Wang or the other applied prior art would have fairly suggested an electrically conductive compound to one of ordinary skill in the art.

The examiner, therefore, has not established a prima facie case of anticipation or obviousness of the appellants' claimed invention.

DECISION

The rejections of claims 38-43 and 46 under 35 U.S.C. § 102(b) over Wang, claims 38-43 and 46 under 35 U.S.C. § 103 over Wang in view of Gerdon, Planchamp and the appellants' admitted prior art, and claims 45 and 47 under 35 U.S.C. § 103 over Wang in view of Weinberg, are reversed.

REVERSED

TERRY J. OWENS
Administrative Patent Judge

MURRIEL E. CRAWFORD
Administrative Patent Judge

STUART S. LEVY
Administrative Patent Judge

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